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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TODD A. THOMPSON,
MARK S. LOW, and MICHAEL J. HORZEWSKI

Appeal 2009-003514
Application 09/883,089
Technology Center 3700

Decided:¹ June 29, 2009

Before LORA M. GREEN, MELANIE L. McCOLLUM, and
JEFFREY N. FREDMAN, *Administrative Patent Judges*.

GREEN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-4, 7-12, 14, and 15. We have jurisdiction under 35 U.S.C. § 6(b).

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

Claim 1 is representative of the claims on appeal, and reads as follows:

1. An ultrasound applicator for applying ultrasound energy to the thoracic cavity of an individual, said ultrasound applicator comprising
a housing sized and configured for placement during use on a chest or near a sternum, the housing having inferior and superior edge portions and lateral side portions,
an ultrasound transducer carried within the housing to transcutaneously apply ultrasound energy to the thoracic cavity, the ultrasound transducer being sized to provide a power density not exceeding 3 watts/cm^2 at a maximum total power output of no greater than 200 watts operating at a fundamental therapeutic frequency not exceeding 500 kHz, whereby the application of ultrasound energy increases the blood flow of the individual; and
a strap assembly affixed to inferior and/or superior edge portions of the housing to stabilize the housing during application of ultrasound energy, the strap assembly being substantially free of components affixed to the lateral side portions of the housing, to leave the chest of the individual on the lateral side portions of the housing substantially uncovered and bare to allow placement of another device on bare skin alongside the housing during use.

The Examiner relies on the following evidence:

Peterson	US 6,126,619	Oct. 3, 2000
Talish	US 6,432,070 B1	Aug. 13, 2002

We affirm.

ISSUE

The Examiner concludes that claims 1-4, 7-12, 14, and 15 are rendered obvious by the combination of Talish and Peterson.

Appellants contend that neither Talish nor Peterson teach or suggest leaving the chest of the individual on the lateral side portion of the housing substantially uncovered and bare to allow placement of another device on bare skin alongside the housing during use.

Thus, the issue on appeal is: Have Appellants demonstrated that the Examiner erred in concluding that Talish renders obvious an ultrasound applicator having a strap assembly that is “substantially free of components affixed to the lateral side portions of the housing, to leave the chest of the individual on the lateral side portions of the housing substantially uncovered and bare to allow placement of another device on bare skin alongside the housing during use” as required by claim 1?

FINDINGS OF FACT

FF1 The Specification teaches that the present invention “provides systems and methods that make it possible to initiate and maintain treatment of a reduced blood perfusion incident using ultrasound in a clinical location or a non-clinical, even mobile location, outside a traditional medical setting.” (Spec. 2.)

FF2 Figure 4 and 5 of the instant disclosure are reproduced below:

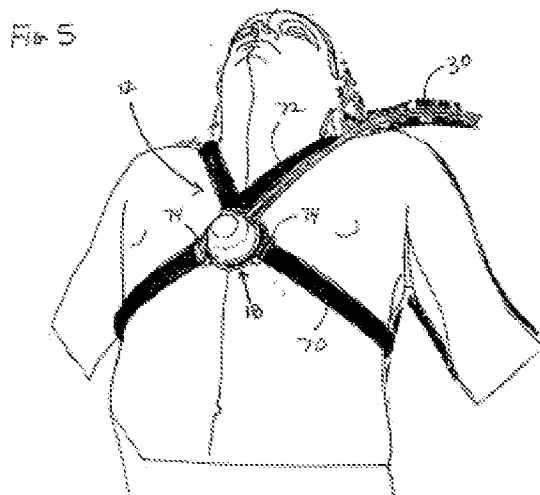
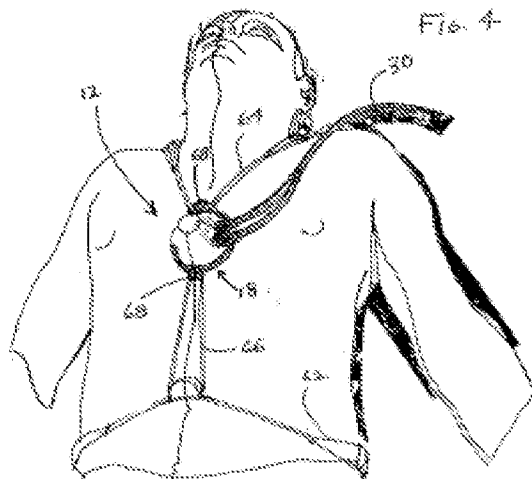


Figure 4 shows a view of the ultrasonic applicator held by a stabilization assembly in a secure position overlying the sternum of the patient, and Figure 5 shows another type of stabilization assembly (*id.* at 3).

FF3 The Examiner rejects claims 1-4, 7-12, 14, and 15 under 35 U.S.C. § 103(a) as being obvious over the combination of Talish and Peterson (Ans. 2). As Appellants do not argue the claims separately, we focus our analysis on claim 1, and claims 2-4, 7-12, 14, and 15 stand or fall with that claim. 37 C.F.R. § 41.37(c)(1)(vii).

FF4 The Examiner finds that Talish teaches “a system for applying ultrasound to the thoracic cavity of a patient comprising a housing . . . , an ultrasound transducer positioned within the ultrasound housing . . . and an assembly including straps . . . to stabilize placement of the housing on the chest of the patient.” (Ans. 2-3.)

FF5 As to the assembly, the Examiner finds:

The assembly includes a quick release mechanism as seen at the end of straps 20 in figure 1 and a quick release material as seen by the VELCRO in figure 5. As seen in figure 1, the assembly can include a halter worn about the chest and shoulders. The strap assembly is substantially free of components affixed to the lateral side portion of the assembly. Assembly 22 as seen in figure 2 is for illustration purposes only. The function of the assembly is to position the transducers on the patient and to provide comfort in doing so. Talish et al fails to preclude one from making the device longer or shorter in the lateral direction. If the device were to be placed upon a very large patient, the chest of the patient, on the lateral side portions of the housing, would be substantially uncovered and bare. Furthermore, Talish et al disclose, in column 9, that various modifications can be made to the structural configuration of the placement module. Such modifications would have been an obvious design choice based upon many factors such as where the module is positioned and whether other testing is to be performed simultaneously therewith. The placement module includes components that are worn about the back that leave the chest on opposing sides of the housing uncovered which would allow placement of another treatment device on the chest.

(*Id.* at 3.)

FF6 Talish teaches “a method and apparatus for therapeutically treating injuries using ultrasound,” and more specifically, “to a method and apparatus which utilizes an ergonomically constructed ultrasonic transducer

configured to cooperate with a placement module for placement in proximity to any part of the body for therapeutically treating reflex sympathetic dystrophy.” (Talish, col. 1, ll. 11-17.)

FF7 Talish teaches that the apparatus includes a strap or other fastening means so the apparatus may be secured to an injured part of a patient’s body (*id.* at col. 5, ll. 5-7.)

FF8 Figures 1 and 2 of Talish are reproduced below:

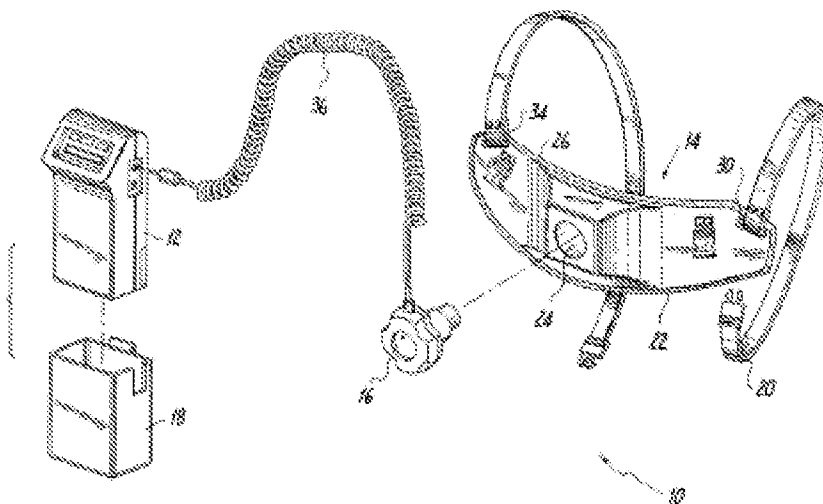


Fig. 1

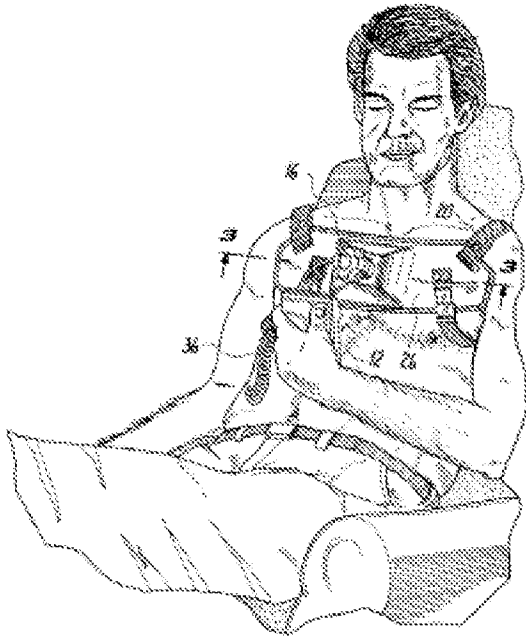


Fig. 2

Figure 1 shows “is a perspective view with parts separated of a first embodiment of a portable ultrasonic treatment apparatus . . . illustrating a main operating unit or controller and a placement module.” (*Id.* at col. 3, ll. 54-57.) Figure 2 is a perspective view of a patient wearing the apparatus shown in Figure 1 (*id.* at col. 3, ll. 59-60).

FF9 Talish teaches that as seen in Figures 1 and 2, the placement support 22 includes a pocket 24 for placement of the ultrasonic transducer assembly, and also includes “a body rest 26 having slots 30 for connecting the placement support 22 to the placement bands 20.” (*Id.* at col. 5, ll. 34-38.)

FF10 Talish teaches further that the “placement support 22 may be constructed of hard plastics which may be custom molded for a particular patient.” (*Id.* at col. 5, ll. 39-41.)

FF11 Talish also teaches that “various modifications may be made in the structural configuration of the placement module.” (*Id.* at col. 9, ll. 24-25.)

FF12 The Examiner notes that Talish “fails to specifically disclose the operating parameters of the ultrasound energy or the use of a circulating fluid.” (Ans. 3.)

FF13 The Examiner finds that Peterson “is just one example of many which disclose the operating parameters of the therapeutic ultrasound as set forth in claim 1.” (*Id.*)

PRINCIPLES OF LAW

The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) secondary considerations of nonobviousness, if any. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 418. It is proper to “take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.* See also *id.* at

421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”).

ANALYSIS

Appellants argue that the combination of Talish and Peterson lead away from the invention of claim 1, as the combination does not teach or suggest all of the claimed features, and that it would not simply be a matter of design choice to arrive at the claimed invention (App. Br. 4). Specifically, Appellants assert that neither Talish nor Peterson teaches or suggests “leaving the chest of the individual on the lateral side portions of the housing substantially uncovered and bare to allow placement of another device on bare skin alongside the housing during use.” (*Id.* at 5.)

In response to the Examiner’s argument that if the device shown on Figure 1 were to be used on a large person, it would leave the lateral side portions uncovered and bare, Appellants contend that Talish teaches that “the positioning and placement of the placement module on the patient’s body is very important,” and the patent “teaches custom molding the placement support of the placement module for a particular patient in order to achieve the appropriate and comfortable placement.” (*Id.*) Thus, Appellants assert, if a large patient were to be treated, a large placement support would be created, and Talish “therefore teaches away from providing a treatment device that leaves the side portions of the chest bare.” (*Id.* at 5-6.)

Appellants argue further that the device of Talish is for pain relief, while the instant device may be used in an emergency setting “where a ‘one

size fits all' application device would be desirable.” (*Id.* at 6.) Appellants argue further that as the device of Talish is not designed for use in an emergency setting, there is no motivation to leave the side portions of the chest bare to accommodate additional treatment devices (*id.*). Appellants contend that although Talish “does contemplate various modifications,” that “the modifications suggested by the Examiner, to provide a placement device which leaves the chest bare of the lateral sides, would render Talish’s placement device too small to be fitted and placed in the preferred way to work for its intended purpose.” (*Id.*)

We agree with the Examiner that Talish renders obvious an ultrasound applicator having a strap assembly that is “substantially free of components affixed to the lateral side portions of the housing, to leave the chest of the individual on the lateral side portions of the housing substantially uncovered and bare to allow placement of another device on bare skin alongside the housing during use” as required by claim 1.

First, as noted by the Examiner, if the placement support were to be placed on a larger person, it would leave the lateral portions of the housing substantially free of components. While Talish teaches that the placement support may be custom molded, it does not require such custom molding, and the use of a device that is not custom molded would allow use in a clinical setting by a number of different patients, and also reduce the cost of the device.

Second, Talish does suggest that the design of the placement support may be modified, and thus contemplates that different strap assemblies would be known to the ordinary artisan. All that would be required of any

configuration of the support is that it allows the ultrasonic transducer to be secured to the patient's body. For example, the ordinary artisan would understand that an X-shaped strap configuration may allow better placement of the ultrasonic transducer against the chest of a female patient.

CONCLUSION OF LAW

We conclude that Appellants have not demonstrated that the Examiner erred in concluding that the Talish renders obvious an ultrasound applicator having a strap assembly that is "substantially free of components affixed to the lateral side portions of the housing, to leave the chest of the individual on the lateral side portions of the housing substantially uncovered and bare to allow placement of another device on bare skin alongside the housing during use" as required by claim 1.

We thus affirm the rejection of claims 1-4, 7-12, 14, and 15 under 35 U.S.C. § 103(a) as being obvious over the combination of Talish and Peterson.

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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